IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BRIDGESTONE SPORTS CO., LTD., and BRIDGESTONE GOLF, INC.,	)	C. A. No. 05-132 (JJF)
Plaintiffs,	)	**PUBLIC VERSION**
v.	)	
ACUSHNET COMPANY,	)	
Defendant.	)	

ACUSHNET'S CORRECTED MEMORANDUM IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT OF INVALIDITY AND NON-INFRINGEMENT OF U.S. PATENT NO. 5,803,834

Richard L. Horwitz (#2246)
David E. Moore (#3983)
POTTER ANDERSON & CORROON LLP
Hercules Plaza, 6th Floor
1313 North Market Street
P. O. Box 951
Wilmington, DE 19899-0951
Tel: (302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com

Attorneys for Defendant Acushnet Company

OF COUNSEL:

Alan M. Grimaldi
Joseph P. Lavelle
Kenneth W. Donnelly
Brian S. Seal

HOWREY LLP
1299 Pennsylvania Avenue, N.W.
Washington, DC 20004
Tel: (202) 783-0800

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STATUTES

Defendant Acushnet Company ("Acushnet") files this Memorandum in Support of Its Motion for Summary Judgment of Invalidity and Non-Infringement of U.S. Patent No. 5,803,834 ("the '834 patent") (Ex. 1).

I. INTRODUCTION

Plaintiffs, Bridgestone Sports Co. Ltd. and Bridgestone Golf, Inc. ("Bridgestone"), accuse certain golf balls made by Acushnet of infringing claim 1 of the '834 patent.[1] By this motion, Acushnet will show that it is entitled to summary judgment of non-infringement. No reasonable jury could find infringement based on the evidence Bridgestone has adduced. Hence, summary judgment of non-infringement is proper.

Acushnet will also show that claim 1 of the '834 patent is invalid under 35 U.S.C § 112. The claim limitation requiring that the hardness at a point within 5 mm of the surface have a specified value is indefinite, in that the value of this hardness can be measured in different ways, yielding materially different results. As the specification and file history do not provide a basis to resolve this ambiguity, the patent fails to apprise the art of what does and does not infringe, and, under Federal Circuit case law, it is invalid. *See Honeywell Int'l v. Int'l Trade Comm'n*, 341 F.3d 1332 (Fed. Cir. 2003)

II. NATURE AND STAGE OF PROCEEDINGS

This is a patent infringement action involving eleven patents and scheduled for trial, starting June 18, 2007. Bridgestone alleges that Acushnet infringes seven patents-in-suit. Acushnet alleges that Bridgestone infringes four patents-in-suit. Fact and expert discovery is finished and a pre-trial conference will be held on May 25, 2007. The Court

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[1] The golf balls at issue for this patent have the side stamps Pinnacle Exception, Exception, DT So/Lo, ◀DT So/Lo▶, PTS So/Lo, ◀PTS So/Lo▶, ◀NXT▶ and ◀-NXT-▶. With the exception of the ◀NXT▶ and DT So/Lo golf balls, there are no material issues unique to any one golf ball for purposes of this motion and all of the arguments herein apply to all the golf balls, except where noted.

held a *Markman* hearing on November 29, 2006. Some claim terms were agreed to at that time, including the claim term at issue in this motion.

Under the Scheduling Order, as amended, case dispositive motions are now due. Under the Court's order, briefing of dispositive motions must follow and be made "pursuant to D. Del. LR 7.1.2." (D.I. 219 at 1).

III. SUMMARY OF ARGUMENT

Summary judgment should be granted in favor of Acushnet on the '834 patent for two independent reasons.

First, Bridgestone cannot prove that any accused product meets the claim limitation of claim 1 that the core have a "hardness within 5 mm inside the core surface" that is "up to 8 degrees lower than the surface hardness" of the core. The testing Bridgestone conducted does not prove infringement of this limitation and its expert has not opined that the limitation is met under the proper construction of the claim. As no reasonable jury could infer infringement in the absence of evidence, summary judgment is proper.

As part of the *Markman* process, the parties stipulated that the claim term "a hardness within 5 mm inside the core surface is up to 8 degrees lower than the surface hardness," should be construed to mean that the hardness of ***each point*** radially inward of the surface of the core to a distance of 5 mm must be within 8 degrees of hardness of the surface hardness.

Bridgestone cannot prove that this limitation, properly construed, is met. Bridgestone's experts have only measured a sample of cores for each accused ball ***at a single point***, approximately 5mm from the surface of the core. Bridgestone's experts have offered no opinion that this single point proves anything about the hardness of all the other points located within 5 mm of the surface of the core. Nor may the jury infer that the one data point is representative of the entire area within 5 mm of the surface.

Bridgestone's experts admit that, due to the nature of variability in golf balls, it is impossible to discern what the hardness is at any specific point inside the core of a golf ball without measuring the point. Hence, Bridgestone cannot prove that an essential claim limitation of the '834 is met by any accused Acushnet ball.

Second, summary judgment is also proper on the ground that claim 1 of the '834 patent is indefinite and hence invalid under 35 U.S.C § 112. The '834 patent and its prosecution history provide no guidance as to how to measure the hardness of a golf ball core at any point within 5mm inside the surface. The test can be done different ways, with materially different results. Here, for example, the parties have used three different methods to measure the hardness at a point within 5mm from the core surface. Only one of the three methods supports a finding of infringement. Because the method of making the measurement is critical to the outcome of the test, and because the '834 patent does not teach the method used to perform the test, the '834 patent is indefinite as a matter of law.

IV. STATEMENT OF FACTS

A. The Patent-in-Suit

The '834 patent was issued in 1998, based on a patent application filed in Japan in 1997. The patent relates to a two-piece, solid construction golf ball, having a solid core and a cover encasing the core. The only claim at issue is claim 1, which claims the invention in terms of the hardness of various parts of the golf ball and the number of dimples on the ball. "Hardness" in this context refers to the measurement obtained by a JIS-C scale durometer at a discrete point on the core. (Ex. 1 at col. 1, lines 28-34; Ex. 2, Felker Invalidity Report at 43-44).

The "Summary of the Invention" of the '834 patent states that the object of the invention is to provide a golf ball which is improved in flight distance, controllability, and hitting feel. (Ex. 1 at col. 1, lines 23-25). It explains that the inventors met this goal

by optimizing the core hardness distribution and the hardness difference between the core and the cover of the golf ball (Ex. 1 at col. 2, lines 22-27).

The patent describes a method by which these properties are achieved. Basically, the patent suggests that the part of the core near the surface of the core (translated somewhat awkwardly from Japanese as the "surface-adjoining region") contributes more to the ball's reaction when struck than do other parts of the core. Therefore, the patent controls the hardness of the part of the core near the surface. Among other things, the patent asserts that:

> ***With a focus on the surface and surface-adjoining region of the core, if the difference in hardness between the surface and the surface-adjoining region (within 5 mm from the surface)*** of the core is too large, the energy associated with deformation is not fully retained. This results in a greater energy loss, failing to maintain sufficient restitution.

(Ex. 1 at col. 1, line 60 – col. 2, line 21, emphasis added).

Consistent with this focus, the claim at issue contains the limitation that the golf ball core has "a hardness within 5mm inside the core surface" that is "up to 8 degrees lower than the surface hardness." (Ex. 1 at col. 7, lines 39-40). The patent explains that the hardness at different points is measured by a JIS-C scale hardness meter. (Ex. 1 at col. 5, lines 52 – 53). Critically, however, the patent does not describe the manner in which the measurement is made. Nothing in the patent or its prosecution history explains how to make this measurement.

B. The Asserted Claim – Claim 1

Claim 1 is the only asserted claim. It reads:

> A two-piece solid golf ball comprising a solid core and a cover enclosing the core and having a number of dimples in its surface, wherein
>
> ***said solid core has such a distribution of hardness as measured by a JIS-C scale hardness meter that*** a surface hardness is up to 85 degrees, a center hardness is lower than the surface hardness by not less than 8 to less than 20 degrees, and ***a hardness within 5 mm inside the core surface is up to 8 degrees lower than the surface hardness,***

said cover has a hardness which is higher than the surface hardness of the core by 1 to 15 degrees and a gage of 1.5 to 1.95 mm, and

the number of dimples is 360 to 450.

(Ex. 1, '834 patent at col. 7, lines 32-34, emphasis added).

C. The Parties' Agreed to the Construction of the "Within 5mm Inside the Core Surface" Claim Term

As noted above, the parties agreed during the *Markman* briefing that the highlighted language above should be construed to mean that "the hardness of each point within the region of the core which radially extends from the surface to a depth of 5mm in cross section." (Ex. 3, Joint Claim Construction Statement, D.I. 228, at 13).

The parties' agreed-upon claim construction is consistent with the specification, which defines "the hardness within 5mm inside the core surface" as "the hardness of a region of the core which radially extends from the surface to a depth of 5 mm in cross section." (Ex. 1, '834 patent at col. 3, lines 6-8).

D. Bridgestone's Infringement Contention

Larry C. Cadorniga, Bridgestone's expert, has opined that the limitation "a hardness within 5 mm inside the core surface is up to 8 degrees lower than the surface hardness" is met by all of the accused products.[2] Mr. Cadorniga based this opinion solely upon the results of measurements performed ***at a single point*** approximately 5mm from the core surface. (Ex. 5, 3/12/2007 Cadorniga Tr. at 303:20-21; Ex. 6, 1/16/2007 Caulfield Report Ex. 9, ¶¶ 12-26). His opinion is that the hardness at this one point satisfies the claim limitation as he understood it.

Significantly, Mr. Cadorniga agrees that, if the claim construction requires a showing of the hardness at each point within 5mm from the core surface, then testing at

[2] Although he renders this opinion, Mr. Cadorniga admits that he was not able to have tests performed on samples of two of the sidestamps of the accused Acushnet products. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9).

more than one point would be required. (Ex. 5, 3/12/2007 Cadorniga Tr. at 340:18 - 341:1 (emphasis added).

E. Measuring the Hardness at 5mm

Both parties have performed hardness testing at a point approximately 5 mm from the core surface.[3] They did so three ways: (1) by measuring the hardness of the core with 5 mm of core removed, (2) by measuring the inside of a slice taken off the core at the 5 mm point, with the meter pointed towards the surface of the core, and (3) on the surface of a slice cut from the core.

Two of the three techniques show that the accused products have a hardness at 5 mm that falls outside of the claimed range. Below are details on how each of the three tests was performed.

1. Bridgestone's Fall 2006 Testing

Between September and October 2006, Bridgestone's expert Dr. Caulfield tested the core hardness distribution of the accused Acushnet products. (*See* Ex. 7, Caulfield Data Provided to Acushnet on March 28, 2007). He measured the hardness at 5mm from the core surface for each golf ball using a method devised by Bridgestone's experts.[4] (*See* Ex. 9, 3/29/2007 Caulfield Tr. at 126:22 – 129:4; 132:13 – 132:22; Ex. 8, 3/30/2007 Jones Tr. at 110:18 – 113:5).

Hardness at 5mm was measured by cutting and machining the ball so as to expose a flat surface at a depth approximately 5mm from the core surface. (*See id.*).[5] The

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[3] Because Acushnet's testing showed that the hardness at 5mm from the core surface did not come within the claim, Acushnet did not need to test the hardness at any other point to show noninfringement.

[4] Bridgestone performed this measurement on two different sides of the golf ball, identified as "Side A" and "Side B."

[5] Bridgestone performed this measurement on two different sides of the golf ball, identified as "Side A" and "Side B."

hardness was measured on the machined core at the center of this surface. (*See* Ex. 21, 3/29/2007 Caulfield Deposition Exhibit 6). This location was approximately 5mm from the surface of the uncut core.

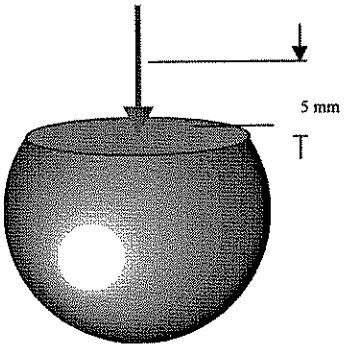

Figure 1: Bridgestone's Fall 2006 Test Protocol

Dr. Caulfield acknowledges that these measurements were "accurately taken." (Ex. 9, 3/29/ 2007 Caulfield Tr. at 153:3 – 153:8). The results of this testing, summarized in Exhibit 10, show that the tested balls do not infringe claim 1.[6]

Bridgestone has apparently chosen to disregard this testing.[7] In his expert report, Mr. Cadorniga never mentions these 5 mm measurements in his report. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9).

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[6] Exhibit 10 shows the average hardness difference measured on the balls tested. Acushnet contends that this is an improper measurement for proving infringement, but provides the value for comparison with the other averages that Mr. Cadorniga provides in his expert report.

[7] Dr. Caulfield has explained that, after initially performing this test, which showed noninfringement, he decided that his initial protocol was probably flawed. This is because, he says, the JIS-C probe would extend into material that was situated more than 5mm from the core surface. This post-hoc reasoning ignores the parties' agreed-upon claim construction, which calls for "the hardness of each point within the region" 5 mm from the core surface. The point that Dr. Caulfiled tested was within this region. (*See* Ex. 9, 3/29/2007 Caulfield Tr. at 178:13-178:15 (acknowledging that the point tested was on a plain cut at 5 mm from the surface)). The direction in which he pointed his JIS-C probe is therefore irrelevant to the claim as construed by the parties. Furthermore, Dr. Caulfield does not contend to be one of ordinary skill in the golf ball art, and his

On March 28, 2007 Bridgestone faxed the raw data for these particular tests to Acushnet without any further explanation.[8] (*See* Ex. 7).

2. Bridgestone's January 2007 Testing

In January, 2007, Bridgestone performed additional testing on the hardness at 5mm from the core surface on a different set of accused golf balls. This testing was performed by machining a portion of the golf ball core so that it was approximately 5 mm thick. (*See* Ex. 9, 3/29/2007 Caulfield Tr. at 126:22 – 129:4; 132:13 – 132:22; Ex. 8, 3/30/2007 Jones Tr. at 110:18 – 113:5). The hardness was measured on the specimen at the center of the machined surface. (*See* Ex. 22, 3/29/2007 Caulfield Deposition Exhibit 7). This location was approximately 5mm from the surface of the uncut core.

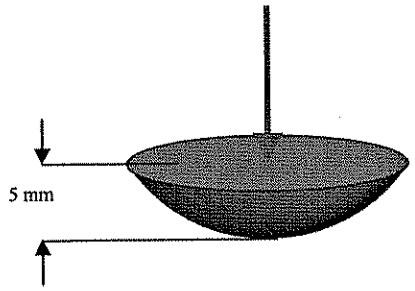

Figure 2: Bridgestone's January 2007 Test Protocol

This testing showed results significantly different than Bridgestone's previous testing. According to these test results, all of the accused products have a hardness at 5 mm from the core surface that lies within the claimed range, with the exception of the ◀NXT▶ and DT So/Lo models, which were not tested. Mr. Cadorniga reports this data

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interpretation of the claim is therefore irrelevant as to whether the claim would apprise those skilled in the art of its scope. (*See* Ex. 9, 3/29/2007 Caulfield Tr. at 33:10 – 33:17).

[8] Due to the timing of this disclosure (weeks after rebuttal reports were due and even after the deposition of Dr. Felker), Acushnet's expert, Dr. Felker, was unable to consider, use or rely upon any of this testing information to prepare his opinions of non-infringement in rebuttal.

in Table F-4 of his expert report. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9 to F-10).[9]

3. Acushnet's February 2007 Testing

In February 2007, Acushnet engineers tested accused balls by a third method. In the Acushnet tests, the cores were cut in half along their diameter. Then, Acushnet measured the resulting hemispherical surface at a point approximately 5mm from its edge. (*See* Ex. 11, 2/20/2007 Felker Report at ¶ 412). [redacted] As shown in Exhibit 13, Dr. Felker's summary of this testing data shows that the accused products do not infringe claim 1. (*See* Ex. 13, 2/20/2007 Felker Report Ex. 31).

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[9] Table F-4 purports to show hardness testing performed on ***one set*** of golf balls. That is, it shows a "Core Surface Hardness" and a "Hardness Within 5 mm Inside the Core Surface," and then the "Difference" between the two. (Ex. 4, 1/16/2007 Cadorniga Report at Table F-4 (showing the "Difference," "A-B" to be the difference between columns "A" and "B")). However, the actual difference between Columns "A" and "B" does not equal the number reported as the "Difference."

The raw data, which Acushnet requested from Bridgestone immediately after Bridgestone served Mr. Cadorniga's report, shows that the "Core Surface" hardness was taken from the cores measured in Fall 2006, and the "5mm" hardness was taken from the cores measured in January 2007. What the table purports to be the "Difference" between the two is actually a measurement of the difference between the two measurements performed on the cores measured in January 2007. Bridgestone did not report the "Core Surface" hardness measured in January 2007 or the "5 mm" hardness measured in Fall 2006, because if they had done so, it would have been clear that based on the measurements pursuant to the January 2007 protocol the Acushnet accused balls met the limitation, but based on the measurements pursuant to the Fall 2006 protocol, they did not. (Ex. 8, Jones Tr. 139:11-166:5).

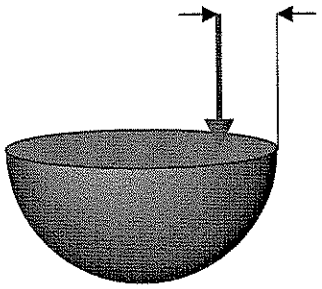


Figure 3: Acushnet's February 2007 Test Protocol

4. The Materiality of the Test Procedure

Bridgestone's expert, Dr. Caulfield, admits that the orientation of the hardness meter is critical because the hardness measurement is impacted by the thickness of the material under the hardness meter. He acknowledges that "the substructure influences hardness values." (Ex. 9, 3/29/2007 Caulfield Tr. 150:8 – 150:10). Acushnet's expert, Dr. Felker, also opined that "the hardness underneath the sample would have affected the measurement." (Ex. 11, 2/20/2007 Felker Report at 111).

This position is obviously borne out by the results. Depending upon which method is used to perform the test, the results show either infringement or the absence of infringement. Assuming that all three tests were done by skilled artisans, reading the patent and trying to interpret what it discloses, leads only to one conclusion – the patent does not disclose enough information about the 5mm measurement to allow the public to determine whether or not a given core infringes the patent.[10]

[10] There are some flaws in Bridgestone's methodology. Dr. Felker pointed out that Bridgestone's January 2007 testing violated the ASTM 2240 standard for test piece size and shape. (*See* Ex. 11, 2/20/2007 Felker Report at ¶¶ 406 – 407). Dr. Caulfield admitted both that Bridgestone's January 2007 test method violated the requirements of the ASTM 2240 standard and that Bridgestone's Fall 2006 method was not technically measuring within 5 mm of the surface. (*See* Ex. 9, 3/29/2007 Caulfield Tr. at 197:5–197:12).

V. ARGUMENT

A. APPLICABLE LAW

1. Summary Judgment Standard

Summary judgment is appropriate when there are no issues of material fact such that the movant is entitled to judgment as a matter of law. *See* Fed. R. Civ. P. 56; *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). Evidence, and any inferences to be drawn therefrom, should be viewed in the light most favorable to the non-movant. *Id.* at 255. However, where the party opposing summary judgment bears the burden of proof at trial, it must do more than cast metaphysical doubt regarding the material fact. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 322-24 (1986). It must also do more than offer a mere scintilla of evidence to defeat summary judgment. *See Anderson,* 477 U.S. at 251. Rather, it must show the existence of a genuine issue of material fact, which exists *only if* the evidence is such that a reasonable jury could reach a verdict in its favor. *Id.*

2. Infringement

To demonstrate literal infringement in particular, a patentee must supply sufficient evidence to prove that the accused product meets every element of a claim. *See Rohm & Haas Co. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997). Summary judgment must be granted against a patentee who has failed to introduce evidence sufficient to establish its burden of proof at trial on the existence of every element challenged. *See Novartis Corp. v. Ben Venue Lab., Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001).

3. Indefiniteness

A claim is invalid under 35 U.S.C. § 112 for indefiniteness if the clam, when read in light of the specification, fails to apprise those skilled in the art of its scope. *See Smithkline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340 (Fed. Cir. 2005). The

definiteness requirement of § 112 "focuses on whether the claims, as interpreted in view of the written description, adequately perform their function of notifying the public of the [scope of the] patentee's right to exclude." *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1371-72 (Fed. Cir. 2001).

Indefiniteness is a question of law. *See Exxon Research & Eng'g Co. v. United States,* 265 F.3d 1371, 1376 (Fed. Cir. 2001). The Court must resort to the intrinsic record of the patent and its file history to determine whether the intrinsic record is adequate to permit an ambiguous claim limitation to be construed. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). If, after consulting the intrinsic record, the claim term remains "insolubly ambiguous," then no narrowing construction can be made and the claim is invalid as indefinite. *See Honeywell Int'l*, 341 F.3d at 1340.

Honeywell is a particularly analogous precedent here. In *Honeywell*, a limitation in the claim could have been measured in one of several ways that were recognized in the art. Depending on how the measurement was performed, the result showed either infringement or non-infringement. *Id.* at 1339. After scouring the intrinsic record for a way to construe the claim limitation that would make it definite, the Federal Circuit concluded that a principled way to construe the claim limitation at issue could not be found, as the patent and its file history were simply silent on the point. *Id.* at 1339-40. Thus, the court found the patent in suit was invalid under Section 112 as indefinite. *Id.* at 1340.

VI. ARGUMENT

A. Bridgestone Cannot Establish Literal Infringement of the Asserted Claims

The parties have agreed to a stipulated claim definition, and it should be adopted. *See, e.g.* Ex. 18, *Prism Tech., LLC v. Verisign, Inc.*, No. 05-214-JJF, 2007 U.S. Dist. LEXIS 24065, at *12 (D. Del. April 2, 2007) ("the parties have agreed upon definitions,

which the Court adopts"); *Adobe Sys., Inc. v. Macromedia, Inc.*, 201 F. Supp. 2d 309, 319 (D. Del 2002) (same); *Seal-Flex, Inc. v. Athletic Track and Court Constr.*, 172 F.3d 836, 842 (Fed. Cir. 1999) (declining to address a definition when the parties do not dispute the term).

Properly construed, the limitation at issue is met only by a showing that ***each*** and every point – and not just ***any*** one point – located within 5 mm of the core surface has the claimed hardness. That is, all points within 5 mm of the surface of the core must have a hardness that is within 8 degrees of the surface hardness.

The extrinsic evidence in this case also supports the parties' construction. [redacted]

To show literal infringement of a patent, a patentee must supply sufficient evidence to prove that the accused product meets every element of a claim. *See Rohm & Haas Co.*, 127 F.3d at 1092; *Signtech USA Ltd. v. Vutek, Inc.*, 174 F.3d 1352, 1358 (Fed. Cir. 1999) ("Literal infringement of [a] patent requires that the accused device contain ***each*** of the claim elements. . ." (emphasis added)). Therefore, Bridgestone's burden is to prove what the hardness is at ***each*** point between the surface and a depth of 5mm from the surface.

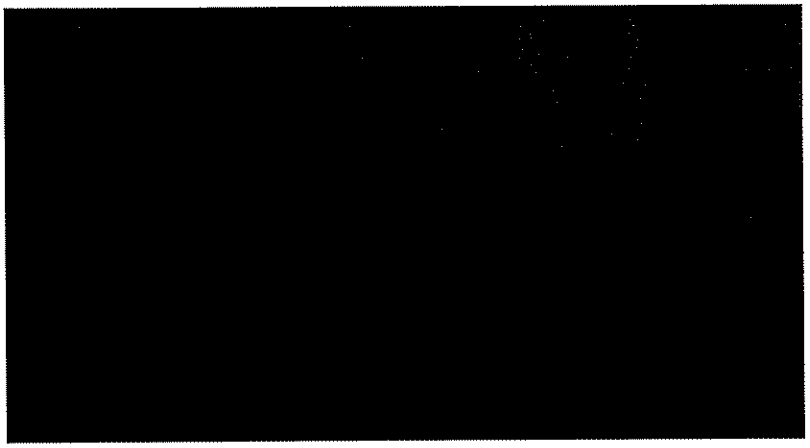
Bridgestone's evidence only shows the hardness at the surface of the core and a single point 5mm below the surface. This testing fails to show the hardness at ***each*** point in that region. Likewise, Mr. Cadorniga's report does not opine on all of the points

within 5 mm of the surface of the core. To the contrary, he opines only that the testing he reviewed shows that ***a point*** within 5 mm of the surface meets the required hardness profile. (Ex. 5, 3/12/2007 Cadorniga Tr. at 311:11 – 3:11:20; 327:18 – 327:22).

Nor is Bridgestone entitled to an inference on this record that all points within 5 mm of the core have the required hardness gradient. Bridgestone's own experts have testified that it is impossible to predict the hardness of each point within the core of the golf ball without actual testing. Mr. Calabria testified that it is known that some golf ball cores have a hardness profile which peaks or dips along radial directions of the core. (Ex. 15, 2/20/2007 Calabria Report at 12. *See also* Ex. 16, U.S. Patent No. 5,803,833). Another Bridgestone expert testified at deposition that, without specific knowledge of the core's manufacturing conditions, one cannot assume what the hardness is at an internal point of the core relative to its surface without testing that point. (*See* Ex. 5, 3/12/2007 Cadorniga Tr. at 234:5-235:11; Ex. 17, 2/20/2007 Cadorniga Report at 49).

[redacted]

[redacted]



Consistent with Bridgestone's witness, Acushnet's expert offers the opinion that it is not possible to draw an inference regarding the hardness at each point less than 5mm from the core surface based solely upon an examination of points at approximately 5mm from the core surface. (*See* Ex. 11, 2/20/2007 Felker Report at ¶¶ 393 - 398).

The factual record in this case is inadequate to support any inference regarding the hardness at points between the surface and 5 mm from the surface that would be sufficient to create a genuine issue of material fact. *See Novartis Corp.,* 271 F.3d at 1054; Ex. 19, *Borough of Olyphant v. PP&L, Inc.*, No. 03-4023, 2004 U.S. Dist. LEXIS 8958, at *41 (D. Pa. May 14, 2004) ("the factual predicate of an expert's opinion must find some support in the record," *citing Pennsylvania Dental Ass'n v. Medical Service Ass'n of Pennsylvania,* 745 F.2d 248, 262 (3d Cir. 1984)). While a non-movant is entitled to inferences from the undisputed facts, those inferences must be reasonable and plausible based on the factual record. Here, no such inference is possible as to the hardness of the cores within 5mm of the surface.

Summary judgment is mandated against a party who has failed to introduce evidence sufficient to establish the existence of an essential element of that party's case on which the party will bear the burden of proof at trial. *Novartis*, 271 F.3d at 1046. Bridgestone has failed to introduce evidence sufficient to establish that each point within

the region that extends from the surface to a depth of 5 mm in cross section has a hardness that is less than 8 degrees lower than the surface hardness. Consequentially, Acushnet is entitled to summary judgment on literal infringement.

B. Bridgestone Cannot Rely on the Doctrine of Equivalents

Bridgestone has not offered any opinion on infringement under the doctrine of equivalents. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9 – F-10).[12] Bridgestone's expert's report has not provided any facts to explain how, if at all, the hardness of the accused products is equivalent to the claimed hardness.

Factually unsupported allegations regarding infringement under the doctrine of equivalents do not create a genuine issue of material fact. *See Zelinski v. Brunswick Corp.*, 185 F.3d 1311, 1317 (Fed. Cir. 1999); *Schoell v. Regal Marine Industries, Inc.*, 247 F.3d 1202, 1210 (Fed Cir 2001) ("the doctrine of equivalents is not a talisman that entitles a patentee to a jury trial on the basis of suspicion; it is a limited remedy available in special circumstances, the evidence for which is the responsibility of the proponent"); *Microstrategy Inc., v. Business Objects Americas*, 410 F.Supp.2d 348, 361 n 4 (D. Del. 2006) (insufficient evidence of literal infringement cannot, without more, support a finding of infringement under the doctrine of equivalents).

Consequentially, Bridgestone does not have a factual basis to rely on the doctrine of equivalents, and Acushnet is entitled to summary judgment on this issue as well.

C. Other Problems with Bridgestone's Infringement Proofs

Although the foregoing is dispositive of the question of infringement, still further flaws exist in Bridgestone's evidence. Specifically, Bridgestone has not shown that any

[12] Although his report is ambiguous, Cadorniga appears to base his opinion on the fact that the numbers provided in Table F-4 are literally less than 8. *See* Ex. 4, 1/16/2007 Cadorniga Report at F-10.

single ball has all the hardness properties claimed in claim 1 of the patent. This is because Bridgestone measured different claim properties on different sets of golf balls, and never proved that a single ball met all the limitations of the 834 patent.

As shown in the table below, Bridgestone's expert relies on one set of golf balls for the surface hardness and difference between surface and center hardness. He relies on a different set of golf balls for the difference between the surface and a point 5mm from the surface:

Element	Set of Balls Tested in Fall 2006	Set of Balls Tested in January 2007
a surface hardness is up to 85 degrees	**Test Performed, and Relied Upon In Report**	Test Performed, but Data Ignored in Report
a center hardness is lower than the surface hardness by not less than 8 to less than 20 degrees	**Test Performed, and Relied Upon In Report**	Test Allegedly Not Performed
a hardness within 5 mm inside the core surface is up to 8 degrees lower than the surface hardness	Test Performed, but Data Ignored in Report	**Test Performed, and Relied Upon In Report**

Mr. Cadorniga has not offered any opinion as to why it is appropriate to measure one element of the "distribution of hardness" on one ball and the remaining elements on another ball, and then combine the two as proof that any one ball infringes the '834 patent by meeting all of its elements. He has offered no explanation as to why he performed his measurements in this way. And he has not offered any opinion as to why this is a valid means of proving that each of the balls has the same property.

At the minimum, Mr. Cadorniga must show that the two different sets of balls that he measured have identical hardness. Without this showing, then there can be no basis for combining the measurements taken on the different balls, since hardness gradient is what is critical for meeting the limitation of the patent. Mr. Cadorniga has provided no data to prove this point. However, the raw data that Dr. Caulfield provided shows that

the two sets of balls are not the same. For example, the surface hardness clearly varied between the groups:

Model	◀NXT▶	◀-NXT-▶	DT So/Lo & PTS So/Lo	◀DT So/Lo▶ & ◀PTS So/Lo▶	Pinnacle Exception	Exception
Caulfield Designation	N1	N2	D1	D2	E1	E2
Average Surface Hardness on Balls Measured in Fall 2006	83.2	81.81	85.3	82.13	83.90	79.08
Average Surface Hardness on Balls Measured in January 2007	Not Measured	82.73	Not Measured	83.46	83.98	83.49

Furthermore, Mr. Cadorniga has not shown how many accused Acushnet products infringe. He has only baldly asserted that all products infringe, based on his own *ipse dixit*. Moreover, his broad assertion is contradicted by his own data. As evidenced by Dr. Caulfield's data, there is significant ball-to-ball variation in hardness measurements, so that, in almost every instance, at least some golf balls do not meet each claim limitation. (*See* Ex. 6, 1/16/2007 Caulfield Report Ex. 18 (showing that the maximum surface hardness measured on the D2, D1, and E1 golf balls lies outside of the claimed surface hardness range)).

As Bridgestone has neither proven that any one particular golf ball infringes the '834 patent, nor has produced any evidence sufficient for the finder of fact to quantify the actual number of Acushnet products that do infringe under its flawed methodology, Bridgestone has proven nothing by way of infringement.

D. Bridgestone Offers No Evidence of Infringement for the ◀NXT▶ and DT So/Lo Golf Balls

Mr. Cadorniga does not rely on any testing to support his opinion that the ◀NXT▶ and DT So/Lo balls infringe claim 1. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9 to F-10). He simply assumes that these balls have the same hardness distribution as the ◀-NXT-▶ and ◀DT So/Lo▶. He simply cites to Acushnet documents and then gives his opinion that the balls have the same gradient with nothing more than his *ipse dixit* to support it. (*See* Ex. 4, 1/16/2007 Cadorniga Report at F-9 to F-10). This showing is inadequate to carry Bridgestone's burden of persuasion. *General Electric v. Joiner*, 522 U.S. 136, 146 (1997) ("nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert"). A patentee must make a prima facie showing as to each accused device before the burden shifts to the accused infringer to offer contrary evidence. *L & W, Inc. v. Shertech, Inc.*, 471 F.3d 1311, 1318 (Fed. Cir. 2006) (finding that an expert's assumption that all accused products are like the one he tested is inadequate to shift the burden of proof to the accused infringer). Because Bridgestone has provided nothing more than Mr. Cadorniga's unsupported assumption to support its infringement claim against the ◀NXT▶ and DT So/Lo golf balls, Acushnet is entitled to summary judgment of non-infringement on these balls.

E. Claim 1 is Indefinite

As it is not possible to discern from the 834 patent and its file history how to perform the measurement within 5mm of the surface, and as different plausible measurements yield different conclusions on infringement, the Court should find claim 1 of the 834 patent invalid under 35 U.S.C § 112 as indefinite.

The "hardness within 5 mm" limitation is a novel limitation that the patentee devised and coined in the patent as the difference between a hardness measurement taken at the surface and measurements of the hardness within 5 mm of the surface. (Ex. 1, '834

patent at col. 3, lines 5-7). However, critically, the applicants never disclosed how to perform the tests on the core to determine the hardness of the interior points. Thus, the intrinsic evidence does not explain how to make this measurement.

Likewise, as this hardness within 5mm limitation is a "made up" property, created and coined in the patent, there is no industry standard method for performing the test. The extrinsic evidence, in the form of inventor testimony and the application of standards documents, tends to support the way Acushnet performed the test, although it seems unlikely that this extrinsic data can provide a basis to construe the claim limitation under Federal Circuit law.

The only published method for performing such a test – cutting the ball in half and measuring the hardness on the surface of the resulting hemisphere as published in Bridgestone's '707 patent and done by Acushnet – yields results that lie outside of the claimed range.[13] Bridgestone's experts, after studying the patent, devised two different methods to do the test, and only one of them yielded results that fell within the claimed range. (*See* Ex. 10).[14]

The evidence here shows that the testing methodology is critical to the result. The different methods employed by that parties do not produce even "essentially identical results." Two of the methods for preparing samples for hardness testing at 5 mm yield results that lie within the claimed range, while the other method does not yield results within the claimed range. Furthermore, both Dr. Caulfield and Dr. Felker recognized that

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[13] Acushnet maintains that this method is ultimately the only proper method in light of the ordinary level of skill in the art, and that Bridgestone's unpublished methods are improper.

[14] Of course, the method that yielded results within the claimed range was the method Bridgestone chose to disclose in Caulfield's report, while it withheld the other methods until two weeks before the summary judgment motions were due.

the choice of sample preparation method can impact the test results. (Ex. 9, 3/29/2007 Caulfield Tr. 150:8 – 150:10; Ex. 11, 2/20/2007 Felker Report at 111).

On this record, the Court should conclude as a matter of law that Claim 1 is insolubly ambiguous as it does not specify how to measure the hardness within 5mm of the core surface. As such, it does not sufficiently apprise the public of what does, and does not, infringe the patent, as the testing in this case shows. Consequentially, the "hardness within 5 mm" limitation is indefinite.

The present facts are closely analogous to those in *Honeywell International*. *See Honeywell Int'l*, 341 F.3d at 1332. *Honeywell* concerned a test, MPE, which was defined in the patent as the difference between two melting points measured on a specimen. *Id.* at 1339. While the test itself was explicitly defined in the patent, the method of preparing samples for the test was not addressed anywhere in the patent or its prosecution history. *Id.* There were three published methods of sample preparation. *Id.* at 1336. The parties further utilized another, unpublished method. *Id.* The published methods yielded results that did not meet the claim, whereas the unpublished method yielded a MPE result that met the claim. *Id.* It was recognized in the art that the sample preparation methodology would impact the measurement obtained. *Id.* at 1337.

The Federal Circuit held that the sample preparation method was critical to discerning whether a sample met the claim because the different methods did not produce "identical or even 'essentially identical results.'" *Id.* at 1340-41. The court held that the claims were insolubly ambiguous with respect to a required sample preparation method because the claims, the written description, and the prosecution history failed to provide any guidance as to what one of ordinary skill in the art would interpret the claim to require. *Id.* at 1340. Because knowing the proper sample methodology was necessary to practice the invention, it found the claim indefinite. *Id.*

The reasoning of the Federal Circuit in *Honeywell International* is equally applicable here, and the Court should find claim 1 of the 834 patent invalid under 35 U.S.C. § 112 as indefinite.

VII. CONCLUSION

For all of the foregoing reasons, Acushnet respectfully requests that the Court grant its Motion for Summary Judgment of Non-Infringement on the '834 Patent for all accused Acushnet products, and, alternatively, for the ◀NXT▶ and DT So/Lo golf balls. Acushnet also respectfully requests the Court to grant its Motion for Summary Judgment of Invalidity for claim 1 of the '834 patent.

POTTER ANDERSON & CORROON LLP

By: */s/ David E. Moore*
Richard L. Horwitz (#2246)
David E. Moore (#3983)
Hercules Plaza, 6th Floor
1313 N. Market Street
P.O. Box 951
Wilmington, DE 19899-0951
(302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com

Attorneys For Defendant / Counterclaim Plaintiff / Acushnet Company

OF COUNSEL:

Alan M. Grimaldi
Joseph P. Lavelle
Kenneth W. Donnelly
Brian S. Seal
HOWREY LLP
1299 Pennsylvania Avenue, N.W.
Washington, DC 20004
Tel: (202) 783-0800

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CERTIFICATE OF SERVICE

I, David E. Moore, hereby certify that on April 20, 2007, the attached document was hand delivered to the following persons and was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading:

Jack B. Blumenfeld
Maryellen Noreika
Leslie A. Polizoti
Morris, Nichols, Arsht & Tunnell
1201 N. Market Street
Wilmington, DE 19801

I hereby certify that on April 20, 2007, I have Electronically Mailed the documents to the following:

Robert M. Masters
Paul, Hastings, Janofsky & Walker LLP
875 15th Street, N.W.
Washington, D.C. 20005
RobMasters@paulhastings.com

/s/ David E. Moore
Richard L. Horwitz
David E. Moore
Potter Anderson & Corroon LLP
Hercules Plaza – Sixth Floor
1313 North Market Street
P.O. Box 951
Wilmington, DE 19899-0951
(302) 984-6000
rhorwitz@potteranderson.com
dmoore@potteranderson.com

680012 / 28946